



DEPARTMENT OF  
**WATER RESOURCES**

# California Water Plan Update 2013

## Groundwater Content Enhancement

Groundwater Caucus Meeting  
April 12, 2012



# General Overview

# Groundwater Workteam

## Region Offices and Headquarter

### Headquarter

- Lew Moeller
- Mary Scruggs
- Evelyn Tipton
- Eric Senter
- Jose Alarcon
- Karandev Singh



### South Central Region Office

- Dane Mathis
- Mike McKenzie
- John Kirk
- Mike McGinnis

### Northern Region Office

- Kelly Staton
- Bill Ehorn
- Roy Hull
- Jon Mulder

### North Central Region Office

- Chris Bonds
- Mark Nordberg
- Bill Brewster
- Mark Souverville
- Mike O'Connor

### Southern Region Office

- Bob Pierotti
- Tim Ross
- Jack Tung





# Groundwater

## Workteam Leads and Caucus Chairs

### Workteam Lead

- Abdul Khan



### Workteam Co-lead

- Dan McManus

### GW Caucus Chair

- Tim Parker

### Groundwater Caucus

- > 60 members
- Other Caucus participants

### GW Caucus Co-chair

- Vicki Kretsinger



# Water Plan Update 2013

## Groundwater Content Enhancement

Objective

```
graph TD; A[Objective] --> B[Expand information about statewide and regional groundwater conditions]; B --> C[to]; C --> D[better inform groundwater management actions]; D --> E[through]; E --> F[compilation and summarization of data and analysis];
```

Expand information about statewide and regional groundwater conditions

to

better inform groundwater management actions

through

compilation and summarization of data and analysis



# Groundwater Content Enhancement

## In summary

Paint a picture about  
California's groundwater



- ☐ Aquifer system
- ☐ Groundwater conditions
- ☐ Groundwater management practices

Identify gaps



- ☐ Data
- ☐ Monitoring
- ☐ Management

Make recommendations

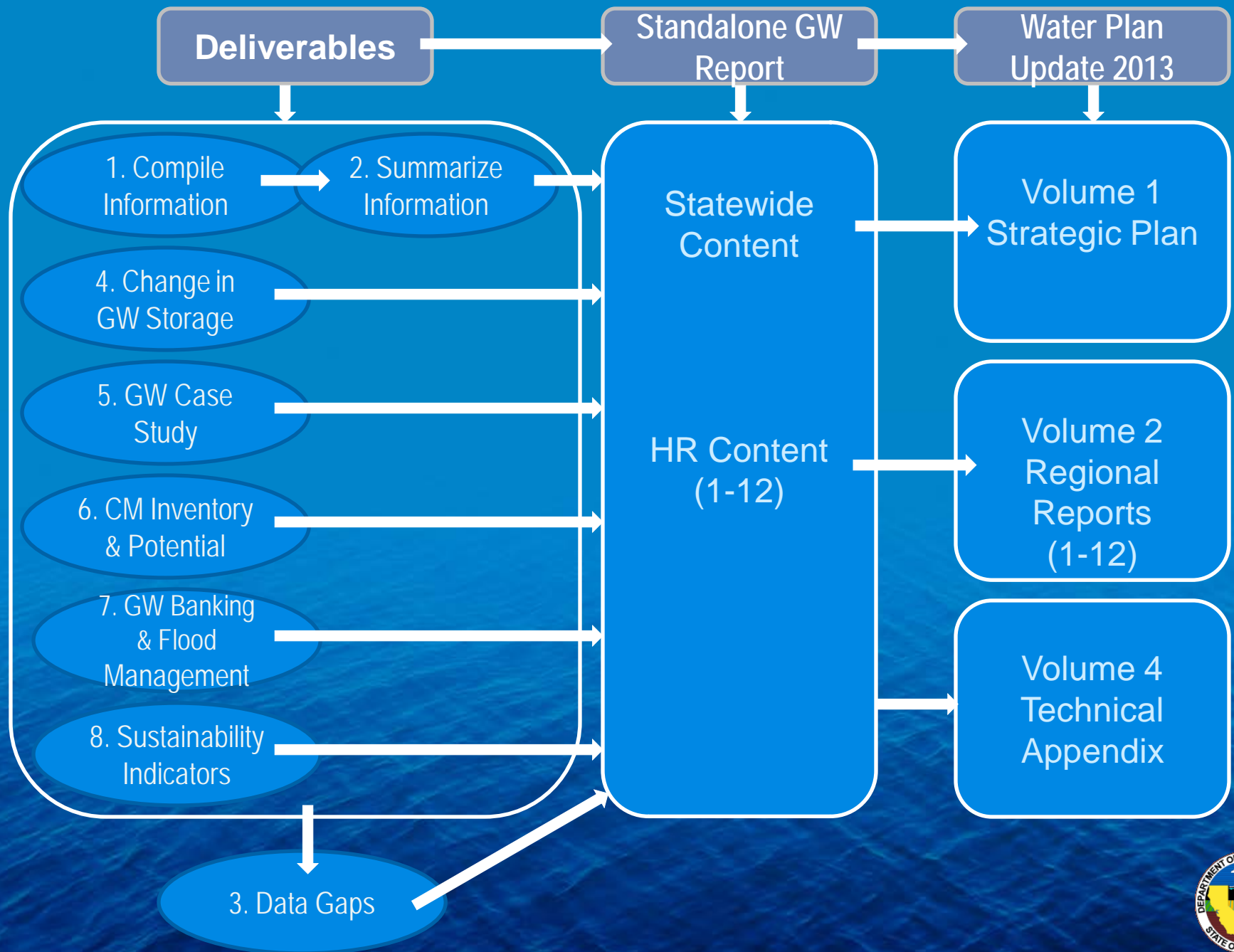


- ☐ GW mgmt guidelines & BMPs
- ☐ GW mgmt plan acceptance process
- ☐ GW mgmt plan reporting
- ☐ State agency policy alignment
- ☐ Resource needs for analysis



# **Key Changes Since Water Plan Update 2009**







# GW Content in CWP Regnl Reports

## Table of Contents

### Current State of the Region

#### Setting

Watersheds  
*Groundwater Aquifers*  
Ecosystems  
Climate  
Demographics  
Land Use patterns  
Tribal Communications

#### Regional RMS Conditions

*Water in the  
Environment*  
*Water Governance*  
*Water Supplies*  
*Water Uses*  
Project Operations  
Surface Water Quality  
*Groundwater Quality*  
*Groundwater Level  
Trends and Issues*  
Near Coastal Issues  
Flood Management

#### Current Relationships with Other Regions & States

#### Implementation Activities (2009-2013)

*Drought Contingency Plans*  
*RMS*  
*Water Governance*  
State Funding Received  
Local Investment  
Water Cons Act of 2009 (SB  
x7-7)  
Interregional and Interstate  
Activities

### *Groundwater Content*

# GW Content in CWP Regnl Reports

## Table of Contents

### Looking to the Future

#### Future Conditions

Future Scenarios

Climate Change

*Interregional and Interstate  
Planning Activities*

Flood Risk Characterization

#### Future Vision

Regional Future Vision

Tribal Objectives/Vision

Relevant Statewide Interests &  
Objectives

#### Regional Water Planning & Mgm

*IRWM Coordination & Planning*

*Accomplishments*

*Challenges*

*Drought & Flood Planning*

### Resource Mgmnt Strategies

#### Strategy Availability

*Regional Strategies*

## *Groundwater Content*

# Document Walk-through



## CALIFORNIA's GROUNDWATER UPDATE 2013

### Statewide Outline

#### 1. INTRODUCTION

- 1.1. Overview of Historical Groundwater Content in California Water Plan
- 1.2. Scope and Intent of the Groundwater Update 2013
- 1.3. Report Organization

#### 2. FINDINGS

#### 3. RECOMMENDATIONS

#### 4. STATEWIDE GROUNDWATER UPDATE

##### 4.1. Statewide Groundwater Supply and Development

- Alluvial Aquifers
- Fractured-Rock Aquifers
- Well Infrastructure and Distribution
- Priority Basins

##### 4.2. Statewide Groundwater Use

- (Report GW Use by HR, use type, and for alluvial vs. fractured aquifer regions)

##### 4.3. Statewide Groundwater Monitoring Efforts

- Groundwater Level Monitoring
- Groundwater Quality Monitoring
- Land Subsidence Monitoring
- Remote Sensing/Satellite Monitoring
- Groundwater Modeling

##### 4.4. Statewide Aquifer Conditions

- Groundwater Occurrence and Movement
  - Depth to Groundwater
  - Groundwater Elevations
  - Groundwater Level Trends
- Change in Groundwater Storage
  - Spring 2005 to Spring 2010 Change in Aquifer Storage Using Groundwater Level Data Analysis
  - Change in Aquifer Storage using GRACE Data Analysis
  - Change in Aquifer Storage using Groundwater Modeling
- Groundwater Quality
- Land Subsidence

##### 4.5. Statewide Groundwater Management

- Groundwater Management Plans
- Groundwater Management Plan Assessment
  - Basin Management Objectives
  - Mapping
  - Monitoring Protocols
  - Voluntary Components

# Draft Standalone Groundwater Report – Statewide Content (Included in Volume 4)



- Bulletin 118-2003 Suggested Components
- ACWA/DWR Survey - Key Factors for Success
- ACWA/DWR Survey - Key Factors Impeding Success
- ACWA/DWR Survey - Groundwater Basin Sustainability
- Groundwater Ordinances
- Special Act Districts
- Court Adjudications
- Other Groundwater Management Planning Efforts
  - Integrated Regional Water Management Plans
  - Urban Water Management Plans
  - Agricultural Water Management Plans
- 4.6. Statewide Case Studies of Groundwater Management
- 4.7. Statewide Conjunctive Management Assessment
  - Conjunctive Management Survey
    - Project Initiation
    - Project Administration
    - Project Goals and Objectives
    - Capital Cost for Project Development
    - Annual Operating Costs of Projects
    - Project Capacity
    - Water Source
    - Put and Take Capacity
    - Project Constraints
- 4.8. Statewide Sustainability Indicators
- 4.9. Statewide Groundwater Gap Analysis
- 4.10. References

# Draft Standalone Groundwater Report – Statewide Content (Included in Volume 4)



# Groundwater Content Enhancement Contact Information

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# **Next Steps / Announcements**

# Groundwater Content Enhancement

## Next Steps

Colorado Hydrologic Region



April 26, 2013

Tulare Lake Hydrologic Region



May 3, 2013

South Lahontan Hydrologic Region



May 10, 2013

DWR Admin Draft



May 31, 2013

Remaining Hydrologic Regions



May 17 – Jun 14, 2013

Public Review Draft



July 31, 2013

# Groundwater Content Enhancement Announcements

Change in Storage Tool /Tech Memo  
Webinar – to be reconfirmed



May 29, 2013  
1:00 -3:30 PM

Basin Prioritization Webinar – date to be  
announced later



No date fixed